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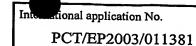
PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 26921	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416							
International application No.	International filing date	(day/month/year)	Priority date (day/month/year)					
PCT/EP2003/011381	14 October 2003	3 (14.10.2003)	14 October 2002 (14.10.2002)					
International Patent Classification (IPC) or national classification and IPC G01N 27/414								
Applicant INFINEON TECHNOLOGIES AG								
 This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. This REPORT consists of a total of6 sheets, including this cover sheet. This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 								
70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets.								
3. This report contains indications rela	3. This report contains indications relating to the following items:							
I Basis of the report								
II Priority								
III Non-establishment	of opinion with regard to	novelty, inventive st	ep and industrial applicability					
Lack of unity of inv	ention							
V Reasoned statement citations and explan	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability							
VI Certain documents	VI Certain documents cited							
VII Certain defects in the international application								
VIII Certain observations on the international application								
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Date of submission of the demand Date of completion of this report								
11 May 2004 (11.05.2004)		_	ovember 2004 (22.11.2004)					
Name and mailing address of the IPEA/EP		Authorized officer						
Facsimile No.		Telephone No.						





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		th th	the description, pages the claims, Nos the drawings, sheets/fig
j. [,	ocyona m	ort has been established as if (some of) the amendments had not been made, since they have been considered to go the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**
a	and 70	0.17).	heets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16
* A	iny re	placemen	nt sheet containing such amendments must be referred to under item 1 and annexed to this report.

v.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1.	Statement					
	Novelty (N)	Claims	1-12	YES		
		Claims		NO		
	Inventive step (IS)	Claims	1-12	YES		
		Claims		NO NO		
	Industrial applicability (IA)	Claims	1-12	YES		
		Claims		NO NO		

2. Citations and explanations

Cited documents

Reference is made to the following documents:

D1: WO-88 08972

D2: US-2001/044177

D3: FR-A-2 779 826

D4: US-A-4 322 680

D5: US-A-4 514 263

D6: EP-A-0 241 991

- The invention concerns a sensor arrangement comprising a plurality of sensor devices formed on and/or in a substrate, each of the sensor devices having:
 - i. an electric signal converter in the form of a field effect transistor (FET);
 - ii. a sensor element coupled to the signal converter, with which the electrical conductivity of the signal converter following a sensor event on the sensor element can be characteristically influenced;
 - iii. a device for keeping constant an electric
 voltage applied to the signal converter;

- iv. a device for detecting the value of the electric current flowing through the signal converter in the form of a sensor signal.
- 2. A sensor arrangement such as described above is known from document D1, in particular figure 2, IGFET 40, sensor element 32, in conjunction with the description, page 8, lines 28 to 30 and page 16, lines 27 to 32.
- 3. Documents D2 to D6 also disclose sensor arrangements having the above-mentioned features.
- 4. The subject matter of the invention differs from the device known from D1 (or from D2 to D6) by virtue of a calibrating device which is designed such that it can bring the gate region of the FET to an electric potential at which the current is not affected by parameter fluctuations in the FET.

The subject matter of claim 1 is thus novel (PCT Article 33(2)).

5. None of the documents cited in the search report discloses or even mentions this type of calibrating device.

The subject matter of claim 1 is thus inventive (PCT Article 33(3)).

By using this type of device it is possible, for example, to prevent the measuring result from being falsified as a result of different threshold voltages that may arise in the FET during the production process.

- 6. Independent claim 11 concerns a method that corresponds to the device according to claim 1; claim 11 is therefore also considered novel and inventive (PCT Article 33(2) and (3)).
- 7. Dependent claims 2 to 10 and 12 are dependent on claims 1 and 11, respectively, and therefore likewise meet the PCT requirements for novelty and inventive step.
- 8. The invention is industrially applicable (PCT Article 33(4)).
- 9. Additional observations
- 9.1 The calibrating device is defined in terms of its effect, thereby contravening PCT Article 6.

The description, however, discloses a number of possible designs for achieving this effect (see figures 8 to 10 and the corresponding parts of the description). Since the inclusion of one of these designs in claims 1 and 11 would unnecessarily restrict the scope of the claims, it does not appear possible to better define the calibrating device. This definition appears to become clear when the description is used to interpret the claims.

- 9.2 Independent claims 1 and 11 have not been drafted in the two-part form defined by PCT Rule 6.3(b).
- 9.3 Contrary to PCT Rule 5.1(a)(ii), the description does not cite documents D1 to D6 or indicate the relevant prior art disclosed therein.

- 9.4 The features of the claims are not followed by reference signs placed between parentheses (PCT Rule 6.2(b)).
- 9.5 The description and more particularly the wording of the problem on page 9, lines 24 to 28, is inconsistent with the claims (PCT Article 6).